

mechanisms to force fast and uniform quenching in the superconductor, therefore reducing burnout risks caused by non-uniformity in the superconductor material.

Please replace paragraph [0025] as follows.

[0025] The present invention as illustrated in Fig. 3, is a FCL component 10 which comprises a superconductor element 12 in rod-form with an axial length, a first end 13 and a second end 15, and an outer coil 14. Superconductor element 12 can be made of high temperature electrically conductive superconductive material, such as BSCCO or YBCO. The coil is also referred to as a trigger coil because it acts to help transition the superconductor 12 into the “quenched” region identified by the critical J-H-T surface of Fig. 1. The outer coil 14 is disposed closely adjacent the outer diameter of the superconductor 12. There also may be intervening layers associated with the mechanical support and thermal management of the superconductor 10 and its corresponding trigger coil 14, but these are typically constructed of materials effectively transparent to the magnetic field and are not a factor in the operation of the outer coil 14 on the superconducting element 12. The outer coil 14 envelopes the superconductor and its length extends beyond the ends of the superconductor element 12 so that the superconductor 12 is situated within the near uniform region of the magnetic fields 18 generated by the coil. When current 20 flows through the trigger coil 14 the magnetic field vector 18 generated by the trigger coil 14 is oriented parallel to the current that flows through the superconductor 12. It is understood that the outer coil 14 may also be constructed of a foil comprising a solid electrically conductive material, arranged concentrically around the superconductor element 12 in the same manner as the respective coil but not having any windings. Fig. 4 shows such a current-carrying foil 16 disposed concentrically around a tubular-configured superconductor 12.